



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Robert J. SMALL et al. Confirmation No.:  
Serial No.: 10/665,417 Art Unit: 1755  
Filed: September 22, 2003 Examiner: Marcheschi, Michael  
For: METHOD OF CHEMICAL Attorney Docket No.: 060937-0215-US  
MECHANICAL PLANARIZATION

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

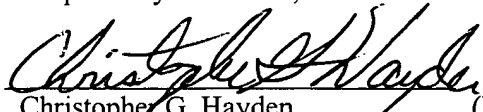
In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

Enclosed with this Information Disclosure Statement are a list of all patents, publications, applications, or other information submitted for consideration by the Office; no copies are provided as these documents are part of the parent application, Serial No. 09/965,223.

No fee is believed to be due for this submission, since this Information Disclosure Statement is being submitted before the first Office Action. Should any fees be required, however, please charge the required fees to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310.

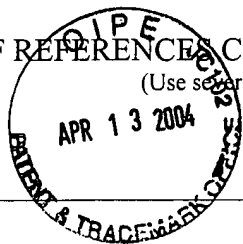
Respectfully submitted,

Date: April 13, 2004

 44,750  
Christopher G. Hayden (Reg. No.)  
**Morgan, Lewis & Bockius LLP**  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
(202) 739-3001

**LIST OF REFERENCES CITED BY APPLICANT**

(Use several sheets if necessary)



ATTY DOCKET NO.

060937-0215-US

APPLICATION NO

10/665,417

APPLICANT

Robert J. SMALL et al.

FILING DATE

September 22, 2003

GROUP

1755

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A01	6,156,661	12/2000	Small			
	A02	6,140,239	10/2000	Avanzino et al.			
	A03	6,117,783	09/2000	Small et al.			
	A04	6,063,306	05/2000	Kaufman et al.			
	A05	5,954,997	09/1999	Kaufman et al.			
	A06	5,981,454	09/1999	Small			
	A07	5,899,740	05/1999	Kwon			
	A08	5,897,375	04/1999	Watts et al.			
	A09	5,863,307	01/1999	Zhou et al.			
	A10	5,858,813	01/1999	Scherber et al.			
	A11	5,840,629	11/1998	Carpio			
	A12	5,780,358	07/1998	Zhou et al.			
	A13	5,770,517	06/1998	Gardner et al.			
	A14	5,735,963	04/1998	Obeng			
	A15	5,614,444	03/1997	Farkas et al.			
	A16	5,575,837	11/1996	Kodama et al.			
	A17	5,527,423	06/1996	Neville et al.			
	A18	5,354,490	10/1994	Yu et al.			
	A19	5,340,370	08/1994	Cadien et al.			
	A20	5,225,034	07/1993	Yu et al.			
	A21	4,724,042	02/1988	Sherman			
	A22	4,556,449	12/1985	Nelson			
	A23	4,013,758	03/1977	Osborg			
	A24	3,592,773	07/1971	Muller			
	A25	3,410,802	11/1968	Radimer et al.			
	A26	3,385,682	05/1968	Lowen			
	A27	3,137,600	906/1964	Margulies et al.			
	A28	6,293,848	09/2001	Fang et al.			
	A29	6,398,827	06/2002	Ota et al.			
	A30	4,959,113	09/1990	Roberts			
	A31	2002/0062600	08/2001	Mandigo et al.			
	A32	4,204,013	05/1980	Arcilesi et al.			
	A33	5,281,311	01/1994	Sharifian et al.			

	A34	6,149,696	11/2000	Kang Jia			
	A35	6,299,795	10/2001	Liu et al.			
	A36	2001/0037821	04/2001	Staley et al.			
	A37	6,117,775	09/2000	Kondo et al.			
	A38	6,461,227	10/2002	Fang			
	A39						
	A40						
	A41						
	A42						

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	B01	2036062	06/1980	UK				
	B02	52081692	09/1993	Japan				
	B03	98/04646	02/1998	PCT				
	B04	98/10050	03/1998	PCT				
	B05							
	B06							

### OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	C01	"Advanced Material and Chemistries for CMP Processing" by R. J. Small, CMP World '99, Nov. 1-3, 1999 21 pgs.
	C02	"Dissolution of Copper and Tantalum Films in Hydroxylamine Based Silica Slurries Under CMP Conditions" by Wayne Huang et al., 1999 Joint Intl. Meeting, Oct. 17-2
	C03	"Challenges of electroplated Copper Film and Device Characteristics for Copper Slurry Design, Maria L. Peterson et al., Semiconductor Fab Tech, Oct. 19, 1999, 5 pages
	C04	"Controlling Copper Loss in Damascene Structures Through Slurry Design" by Maria L. Peterson et al., 16th Intl. VMIC Conf., Sept 7-9, 1999, pages 1-9
	C05	"Copper Removal in Hydroxylamine Based Slurries" by Wayne Huang et al., 7th Intl. Symposium SCP May 2000 9 pages
	C06	"Nitrogen-Based Slurry Development for Copper/Low-K (SiLK™) Integratoin", by R. Small, Chemical Mechanical Polishing 2001 Symposium, October 2001, 15 pages.
	C07	"Electrochemical Behavior of Copper and Tantalum in Silica Slurries Containing Hydroxylamine" by Srini Raghavan et al., 16th Intl. VMIC Conf. September 7-9, 1999, 11 pages
	C08	"Nitrogen-Silica Based Slurry Development for Copper 2nd Step Application" by Robert J. Small et al., 2001 VMIC Conf., LP, Nov. 28-29, 2001, 6 pages.
	C09	"Nitrogen-Silica Based Slurry Development for Copper 2nd Step Application" by Small et al., 2001 VMIC Conference, LP Nov. 28-29, 2001, 6 pages.
	C10	
	C11	

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.